

Income Inequality under Colonial Rule

Evidence from French Algeria, Cameroon, Indochina and Tunisia, 1920-1960

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Abstract: We exploit for the first time income tax tabulations for colonial Algeria, Cameroon, Indochina and Tunisia 1920-1960. As measured by top-incomes shares, inequality was high in French colonies. It was pulled downward by the crisis of the 1930s and WW2 combined, yet in the 1950s income inequality stabilized at much higher levels than metropolitan France. European settlers made the bulk of top-income earners everywhere, yet in the 1950s rich Tunisians counted for one fifth, with possibly a majority of Jews among them. Inequality among settlers was limited, both within and across colonies, and very few of them were extremely rich by metropolitan standards, in contrast with settlers in South Africa or Zimbabwe at the same time.

Almost by definition, colonial societies entailed huge inequalities in political power and voice, as well as in social and economic opportunities, if only along the racial divide between settlers of metropolitan descent and autochthon or slave populations.⁴ A vast historical literature as well as novels has documented the various forms taken by colonial discrimination, on the political, judicial or economic dimensions, and in the everyday life of the colonized. The literature is less vast on inequality within autochthons, and on how and to which extent colonization transformed or froze indigenous elites. While some caids, chiefs, landlords, religious leaders or literate scholars opposed colonial domination and were usually wiped out, others entered in forms of collaboration and often could reap economic benefits. Furthermore, colonial commerce, urbanization and colonial education opened new channels for the accumulation of political and economic resources, which could have resulted in some social mobility, although it is also possible that only the already privileged could seize these opportunities.

Anyhow, as far as quantitative evidence is concerned, not much is known about income or wealth inequality in colonial societies, especially for Africa.⁵ A few studies of social stratification provide for the distribution of population across occupations or social classes, and sometimes estimate the average income earned in each position. For example, in a seminal work on North Africa, Samir Amin estimates average income for Muslims and non-Muslims in agricultural and non-agricultural occupations at the end of the colonial period (1966, p.113-177).⁶ Likewise, Milanovic, Lindert, and Williamson (2007) use this kind of “social tables” to estimate Gini coefficients for colonial Latin America. Then Williamson (2010 & 2015) uses these estimates to argue that colonial Latin America was less unequal than assumed and that inequality rather rose

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⁴ Racial discrimination extended beyond the “Western white settler” typical case, like for instance in colonial Taiwan or Korea, or in Kazakhstan under tsarist Russia’s rule.

⁵ Frankema (2010) looks at the cases of Malaysia, Sierra Leone and Zambia on land inequality.

⁶ See Appendix Table A3.

after formal independence was obtained, in the second half of the 19th century. Yet the social tables approach entails a number of limitations that can lead to underestimating the extent of colonial inequality. First, the method is mostly based on labor earnings attached to occupations, and can find it more difficult to capture other sources of income like land and capital. Second, inequality within occupational groups can be large, even when social classes are finely delineated (like when farmers are broken according to the size of land that they own or cultivate).

In many cases, fiscal sources allow for a more direct approach that complements social tables and addresses their main drawbacks. In the colonial Empires of the 20th century, after World War I, income taxation was gradually implemented by the British and the French. In recent work, Atkinson (2014) exploits income tax data for former British colonies in Africa. Here, using income tax tabulations extracted from French statistical annals, we compute and analyze top income shares in four French colonies between 1920 and 1960. Comparisons are drawn with British colonies in Africa and Asia (Atkinson 2014; Alvaredo & Atkinson 2007; Alvaredo, Bergeron and Cassan 2017), and with the metropolis (Atkinson & Piketty 2007 & 2010).

Of course, this more direct approach is not exempt of difficulties. We discuss the many methodological issues that are raised: sensitivity to population and income aggregates, coverage and enforcement of the income tax, deductions on chargeable income, etc. We make a selection of results that we deem sufficiently robust.

Perhaps unsurprisingly, income inequality in the colonies was high, and was larger than in the metropolis. In the mid-1930s, the share of the top 1% was around 25% in Algeria when in France it reached 15%. After WW2 both the colony and the metropolis experienced a very significant drop, to 15% and 9% respectively. In the 1950s, inequality in Tunisia was at par with Algeria. Before WW2, colonial top 0.1% shares were high and close to metropolitan levels, however while in France the share collapsed from 7 to 2%, in the colonies the share stabilized in-between, around 4%.

European settlers made the great majority of income tax payers. They were rich, but not extremely rich by metropolitan standards. While metropolitan France is three to four times wealthier than its North African colonies, top-income settlers are just twice poorer than top-income metropolitans. Besides, inequality among settlers in a given colony was limited. Across colonies, top-rich settlers do not seem to differ very much in living standards.

Available data provide only a few insights on the inequality within the autochthons, because only a minority was rich enough, compared to Europeans, to be eligible to the income tax. Rich Tunisians made one fifth of the top-rich in the 1950s, while black Africans are absent from the top-quantiles in South Africa. Our estimates suggest that inequality was indeed rather high among Tunisians. Yet, aside to Europeans, Jews made another significant minority in colonial Tunisia, representing around one fifth of non-Muslims, so that at the end of the day the “racial divide” could have been no less salient in North Africa compared to South Africa.

Finally, rich settlers in Algeria and Tunisia were significantly less rich than rich white South Africans or Rhodesians, by metropolitan standards, and closer to rich whites in Kenya or Zambia. The average French settler in 1945 Cameroon compared well with British settlers in Ghana, Nigeria or Uganda.

The remainder of this paper is organized as follows. A first section provides a brief historical background for the four French colonies, along with a description of the various forms of

income taxes that were implemented after WW1. The second section presents the income tabulation data and estimation methodology. The third section describes our tax units population estimates and the fourth our fiscal income estimates. Section 5 presents our results, with details on European settlers, rich autochthons, and a comparison of French and British colonies in Africa. Section 6 concludes.

1. Historical background and chronology of tax reforms

Algeria was part of the Ottoman Empire before it was claimed by France in 1830. Conquest wars lasted four decades, the last large insurrection being the one of the *Kabylie* province in 1871. Then population of French and other European (Spanish, Italian) settlers more than doubled between 1871 and WW1. Jews of Algeria were granted the French nationality in 1871. With the advent of the Third Republic at the same time, the settlers gained momentum against the military administration, and by 1900 obtained some autonomy in government.

In 1932, the starting date for our income tax data, non-Muslims accounted for 14% of the population of Algeria.⁷ After the mid-1930s, the share of non-Muslims started a slow decrease down to 10% in 1961. Then at country independence in 1962, after the liberation war ended thanks to the Evian agreements, almost all *pieds-noirs* chose to leave Algeria.

European settlers made the majority of urban population, and in agriculture produced wine and grew wheat and barley, oranges and lemons, and olives. A significant oil production only started at the very end of the colonial period.

Algeria had been made a French “*département*” and after WW1 tax obligations did not distinguish French or European settlers from Algerian “Muslims” as colonial subjects. The “*impôt complémentaire sur le revenu*” was set as early as in 1920, following the introduction of the income tax in metropolitan France (1914). It came on top of other direct taxes on salaries, benefits, and real estates. It was also designed to replace the old “*impôts arabes*” (arab taxes) that had been kept from the Ottoman period and were abandoned in 1919.⁸ Income tax tabulations do not separate non-Muslim taxpayers from Muslim taxpayers.⁹

Tunisia was also formerly part of the Ottoman Empire and was conquered by France in 1881. It remained a protectorate, the official ruler of which was the bey of Tunis, even if actual power was exerted by the “*resident general de France*” and the French administration. French, Italian and Maltese immigrants settled in numbers until WW1. From then European settlers represented around 6 to 7% of total population, until most of them gradually left the country in the decade following independence in 1956.¹⁰ In 1947, when our income tax data begins, Europeans were 7.3% of population, among which the French accounted for 61% and Italian nationals for 34%. At independence in 1956, this share had decreased to 6.7%. In contrast with Algeria, Jews (called ‘Israelites’) had not been granted French nationality and were counted as “Tunisians”; they represented 1.5% of total population in 1955, hence 18% of “non-Muslims”. Like in Algeria, European settlers produced wine and grew wheat, oranges and lemons, and olives. Europeans

⁷ 15.7% of total tax units, given the differences in age structure and household composition between Europeans and Muslims. See top panel of Table A2 in Appendix.

⁸ The *achour* and the *hokkor* (only in Constantine area) were taxes on agricultural land, the *zekkat* was a tax on cattle, the *lezma* only prevailed in Kabylie and was a head tax with three distinct rates according to estimated wealth.

⁹ Until 1938, the income tax was only levied in Northern Algeria, where more than 90% of the population lived.

¹⁰ 8-9% of total tax units, see Table A2 in Appendix.

gradually left Tunisia after independence; Jews also left, half of them to Israel, the other half to France.

The “*contribution personnelle d’Etat*” was set in 1928. It started as a very simple lump-sum tax whose level only depended on five income brackets, then was transformed into a progressive income tax in 1937 with more and more refined schedules as time passed. It applied to all residents, and Tunisians and Europeans are distinguished in all income tax tabulations that we found, between 1947 and 1957.

French Cameroon resulted from the partition of the German colony of Kamerun between the British and the French at the end of WW1. In 1920, about three quarters were placed under French mandate by the League of Nations, the remaining part, at the border of Nigeria, being under British mandate. French population remained very limited, and did not count more than 4,000 thousands people in 1946, a bit more than 0.1% of total population. The Gaullian reconquest of France started in Cameroon and what is now Center African Republic. French colonists started plantations of rubber, cocoa, palm oil, bananas and groundnuts. Between 1955 and 1962, the French fought a rebellion in the West, like in Algeria. Coffee, cocoa, rubber only came in the late 1950s, and oil production much later after independence (end-1970s).

The “*impôt global sur le revenu*” was introduced in Cameroon in 1937 and applied to all residents. For eligible taxpayers whose income lied above the threshold, it replaced the head tax. There were two versions of the tax, one for Europeans and the other for Africans.¹¹ The European version was a true progressive income tax, while the African version was a lump-sum tax whose level depended on income. In 1945, Europeans became subject to the “*impôt general sur le revenu*”, while relatively rich Africans were still having the “*impôt personnel nominatif par tranche de revenu*” (tax on registered persons by income range). The *Annuaire Statistique du Cameroun 1938-1945* provides two separate income tabulations for Africans and Europeans in 1946, whose income ranges do not overlap very much.

Indochina is composed of five territories that were gradually conquered by France between 1858 and 1899. Cochinchine (Southern Vietnam, capital city Saigon) was the first in 1862, and was directly ruled as a colony. The other four: Annam (Center Vietnam, capital city Hue), Tonkin (North Vietnam, capital city Hanoi), Cambodge (capital city Phnom Penh), and Laos (capital city Ventiane), were officially protectorates, although Tonkin was finally managed as a colony.¹² The “*gouvernement general*” of Indochina was established in 1897. The Europeans and “*assimilés*” (i.e. non-Asian foreigners) were French for more than 95%, and counted a bit more than 20,000 people in 1920, a bit less than 50,000 at the beginning of the 1940s. More than 10,000 military soldiers arrived between 1945 and 1948 to fight the Viet-Minh rebellion. Half of Europeans resided in Cochinchine in 1920, and two thirds in 1948. Others were mainly in Tonkin. They never represented more than 0.25% of population. Chinese people made a larger minority, counting around 300,000 people in 1920 and more than 600,000 in 1948. After the short-lived invasion by the Japanese at the end of WW2, the French had lost ground and could not recover

¹¹ According to public finance accounts, the income tax was introduced in 1934 in French Central Africa (Afrique Equatoriale Française) and French Western Africa (Afrique Occidentale Française), except for Côte d’Ivoire when it was in 1937, in 1943 in Togo, and 1946 in Madagascar. We unfortunately could not find any tabulation for these colonies.

¹² The territory of Kouang-Tcheou-Wan at the border of China was occupied since 1899 and retroceded to China in 1945. It is not included in our figures.

control over the North. The war for Indochina ended with the French defeat of Dien-Bien-Phu in 1954. The French invested in rice production and exports, rubber, tea and coffee plantations, and exploited coal and tin mineral resources.

The “*taxe personnelle sur les européens et assimilés*” was set in 1920 in all Indochina and applied only to Europeans and other non-Asian foreigners. It was a lump-sum tax whose level depended on twelve levels of income. The implicit rates were very low. It was replaced by the “*impôt général sur le revenu*” that applied to all residents, whose income lied above a pretty high threshold. The latter income tax was first implemented in Cochinchine and Cambodge in the year 1938, then reached Laos and Annam in 1939, and finally Tonkin in 1941. In Cochinchine and Tonkin, tabulations from statistical annals distinguish Europeans, Chinese, Asian foreigners, and Indochinese.¹³

2. Income tax tabulation data and estimation methods

In the best cases, income tax tabulations break down tax payers into income brackets $[\tilde{y}_k; \tilde{y}_{k+1}]$ and for each income range report the number of taxpayers N_k and declared total income before tax Y_k :

Table 1 – The typical income tax tabulation

Income brackets	Total number of taxpayers	Total income declared
Above \tilde{y}_0	N_0	Y_0
Between \tilde{y}_0 and \tilde{y}_1	N_1	Y_1
...
Between \tilde{y}_k and \tilde{y}_{k+1}	N_k	Y_k
...
Above \tilde{y}_K	N_K	Y_K

Then, if we know the total number of potential tax units N , including of course those who lie below the minimum income threshold to be eligible for taxation, we are able to compute the cumulated population share lying above the lower bound of each income bracket: $P_k = \sum_{j \geq k} N_j / N$, for tax payers whose pre-tax income lies above \tilde{y}_k . Further, if we know total household income Y (before tax) in the economy, we are able to compute the income share earned by people lying above \tilde{y}_k : $S_k = \sum_{j \geq k} Y_j / Y$.

Pareto interpolation, as in Atkinson, Piketty & Saez (2011), then allow us to estimate the income share earned by the q percent richest, for any q lying above P_0 and below P_K : S_q for $P_0 \leq q \leq P_K$.

Of course, when the coverage of the income tax is low, P_0 is low and income share estimates are only available for the very rich (top 1% or top 0.1%). Conversely, if the lower bound of the last income bracket is too low, because of insufficient disaggregation of income tax figures, P_K is high and fine top shares cannot be computed in the upper tail of income distribution.

¹³ Cochinchine and Tonkin were the two largest colonies, and the places where the majority of French settlers lived. In the present paper, we aggregate the income tabulations of the five colonies into one for Indochina as a whole, which can be done easily because they share the same income brackets.

Things get a bit more complicated when income tax tabulations only report the number of taxpayers and not the corresponding total income. The top panel of Table A1 in Appendix provides an overview of the occurrence of these cases. We then need to impute a total income in each bracket. When income records are available for another year with the same income brackets, we import the ratio of average income to the lower bound of the bracket from the year with no missing income totals (like for Algérie 1946, using 1947). In other missing years, in particular Algeria 1932-1941, we assume mean income exceeds the lower bound of the bracket by 30%, except for the last unbounded bracket for which we assume 100%.¹⁴ When the total of declared income is available (but not the breakdown into brackets), we adjust the last bracket mean income to meet this total.

For some countries-years, lump-sum deductions for family charges applied and reported income was net of these deductions. The bottom panel of Table A1 in Appendix shows where and when such deductions held: Algeria from 1932 to 1945; and Tunisia throughout (1947-1956). Married couples benefited from a specific deduction, and other deductions depended on the number of children below 18 year-old. We use population census data for Algeria 1948 to estimate the distribution of family types: share of married couples or single parents with one child, two children, three children, four children or more, share of other households with no children. Two separate distributions are estimated for Muslims and non-Muslims. We assume this distribution of family types to be independent of income, and to be stable across time. Anyway, deductions only make a difference in the lowest income brackets. We then compute the average deduction that applies to each country-year, and shift all income brackets and mean incomes by this number.¹⁵

The two next sections explain our estimates for the population total N , and for total household fiscal income Y .

3. Population estimates

Algeria

The total numbers of “Muslims” and of “non-Muslims” are drawn from population census figures for 1931, 1936, 1948 and 1954 (*Annuaire Statistique de l’Algérie* 1955). A population estimate for 1960 is drawn from the United Nations Demographic Yearbook for 1966. The number of non-Muslims is drawn from the *Annuaire Statistique de la France* for 1962. These figures were double-checked by looking at other references like CICRED (1974a), and Fargues (1986). Starting with 1931, population censuses are deemed reliable by demographers. Age pyramids are available for the population censuses of 1936, 1948 and 1954. We use them to compute total population over 15 years of age, separately for Muslims and non-Muslims. We assume that the 1936 age structure applies to 1931, and that the 1954 age structure applies to 1960. Between census years, population figures are interpolated with constant annual growth rates.

From the 1948 population census, we then compute an estimate of the number of tax units for 1948 as the sum of: married men over 15 year-old, widowed and divorced men and women

¹⁴ In years where some income brackets are merged, we adjust the mean income as a weighted average.

¹⁵ In Algeria where Muslim and non-Muslim taxpayers are not distinguished, we assume that non-Muslims make 80% of taxpayers, in accordance with the average share found for Tunisia.

15-69 year-old, single men and women 30-69, 80% of single men and women 25-29, 50% of single men and women 20-24 and 20% of single men and women 15-19, and 50% of single men and women over 70. For Europeans, the figure obtained is 59% of the population over 15, i.e. very close to the 60% figure used by Atkinson (2014). However for Muslims the same proportion only reaches 54% due to a lower average age.

For the sake of simplicity and comparison, we stick with the 60% ratio chosen by Atkinson.¹⁶

Tunisia

The total numbers of Europeans and of Tunisians (including Jews) are drawn from population census figures for 1946 and 1956, corrected by CICRED (1974b). To get the numbers of 15 year-old and over, we use the age pyramid of the 1946 population census.¹⁷

We then apply the same ratio as in Algeria (60%) to get the number of tax units in the non-Muslim and Muslim populations respectively.

French Cameroon

For the population of 1945 Cameroon we adopt the estimate from Frankema and Jerven (2014), as colonial enumerations severely underestimate total population, and are inconsistent with post-independence population census figures. To get at the population of the French part, we apply a ratio of 85%, accounting for the fact that the Southern part of British Cameroons merged with French Cameroon to form present-day Cameroon. The enumeration for 1945, as reported in the *Annuaire Statistique du Cameroun 1938-1945* (volume 1), points to a share of 15 year-old and over of 65%. As this kind of enumerations used to miss a lot of young children, the share is likely to be overstated. In Algeria 1948 and Tunisia 1946, this share is respectively 57 and 59% for Muslims. We rather apply the Algeria's share, and then take 60% of 15+ as our total population of tax units.

Indochina

Total population and population above 15 year-old in each of the five colonies are from Banens (2000). We again take 60% of the 15+ population as an estimate of the total number of tax units. The population of Europeans is available for the years 1921, 1929, 1931, 1936, 1937 (census of Europeans), 1947 and 1948.

We are also able to estimate the number of European military soldiers, who always made more than 20% of Europeans (and more than 50% after 1947). As far as we understood, the majority of army men were exempt from income taxes.

Taking again 60% of 15+ Europeans actually fits rather well with an estimation of the total number of civilian Europeans in employment in 1929 and 1937.

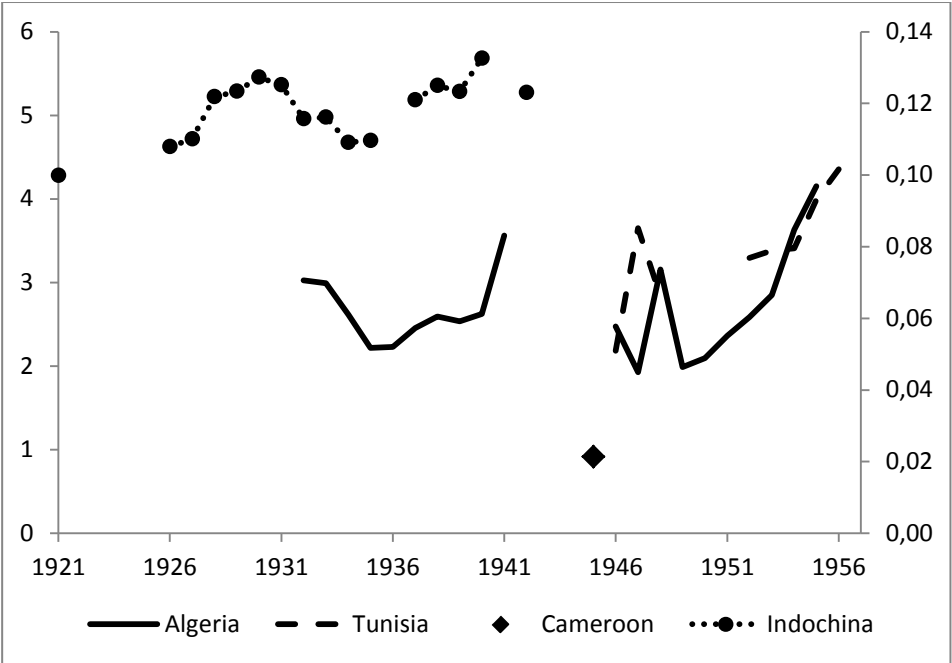
Figure 1 displays the share of income tax payers in our estimated totals of tax units. While in Algeria and Tunisia, income tax payers weigh more than 2% of tax units, they are only 0.9% of

¹⁶ To be further refined.

¹⁷ To be improved by using also the 1956 age pyramid.

them in Cameroon and slightly more than 0.1% in Indochina. These shares fix bounds to the top income shares we can estimate.

Figure 1 – Income tax payers in total tax unit population (%)



Source: Income tax tabulations from French statistical annals for colonies, and authors’ estimations.
 Note: Indochina on right scale, other colonies on left scale.
 Reading: In 1945 Cameroon, taxpayers represent 0.91% of total tax units.

4. National income estimates

Algeria

National accounts are available for the years 1950 to 1957. We project GDP backward from 1950 to 1932 using Samir Amin’s estimate of the growth rate of real GDP between 1930 and 1955 (Amin 1966, p.101). To get GDP in current francs, for years 1938 to 1957 we use the consumer price index in Algiers, and for years 1932 to 1938 we use the metropolitan France price index from Pierre Villa (ref).

We must then go from GDP to household fiscal income.

In 1950s metropolitan France, the gross primary income of households was 85% of GDP, and household fiscal income was around 60% of gross primary income, due to important conceptual differences between the definition of income by national accounts and by the fiscal administration, in particular for non-salaried occupations.

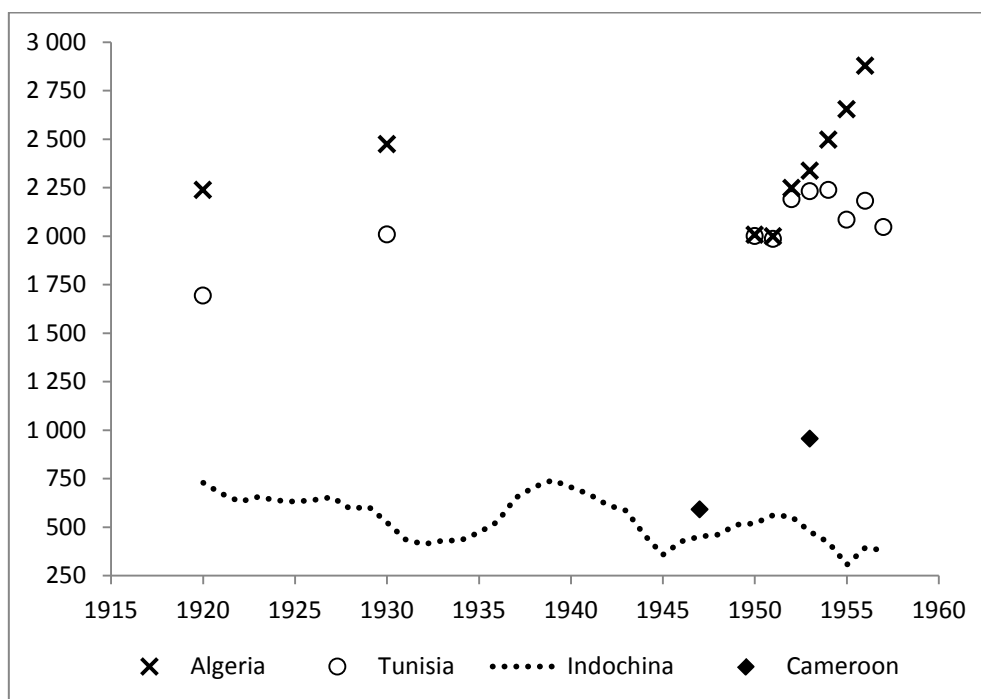
In Algeria, households’ gross primary income also lies between 80 and 87% of GDP in 1950-1957, with a mean of 83% that is also the level of 1950, the base year for our backward

projection.¹⁸ To compute total household fiscal income we then apply a ratio of $0.83 \times 0.60 = 0.50$ to GDP.

Tunisia

Estimates of GDP in constant 1957 francs are available for the years 1950 to 1961, as reported by Zarka (1964, p.214). We translate these estimates in current francs using the consumer price index in Tunis for the years 1938 to 1962. To get household fiscal income we apply a ratio of 50%, as in Algeria, for the sake of parsimony. Yet, like for Algeria before WW2 compared to after, migrants in France were less numerous (in proportion of population), hence remittances were lower; moreover, there were less French soldiers based in Tunisia. Hence once again we could be overestimating household fiscal income.

Figure 2 – Estimates of GDP per capita in 1937 PPP francs



Sources: see text.

Notes: A purchasing power parity conversion factor is computed using a basket of goods in years 1936-38. Compared to the reference country Algeria, prices are found to be respectively lower by 5% in Tunisia, 60% in Indochina, and 20% in Cameroon. See Cogneau, Dupraz & Mesplé-Somps 2017.

French Cameroon

The GDP of the French part of Cameroon was estimated for the years 1947 and 1953 by the French administration in charge of overseas territories. We adopt the 1947 estimate and apply a modest 0.2% real growth rate for GDP per capita to project it backward to 1945 in real terms.

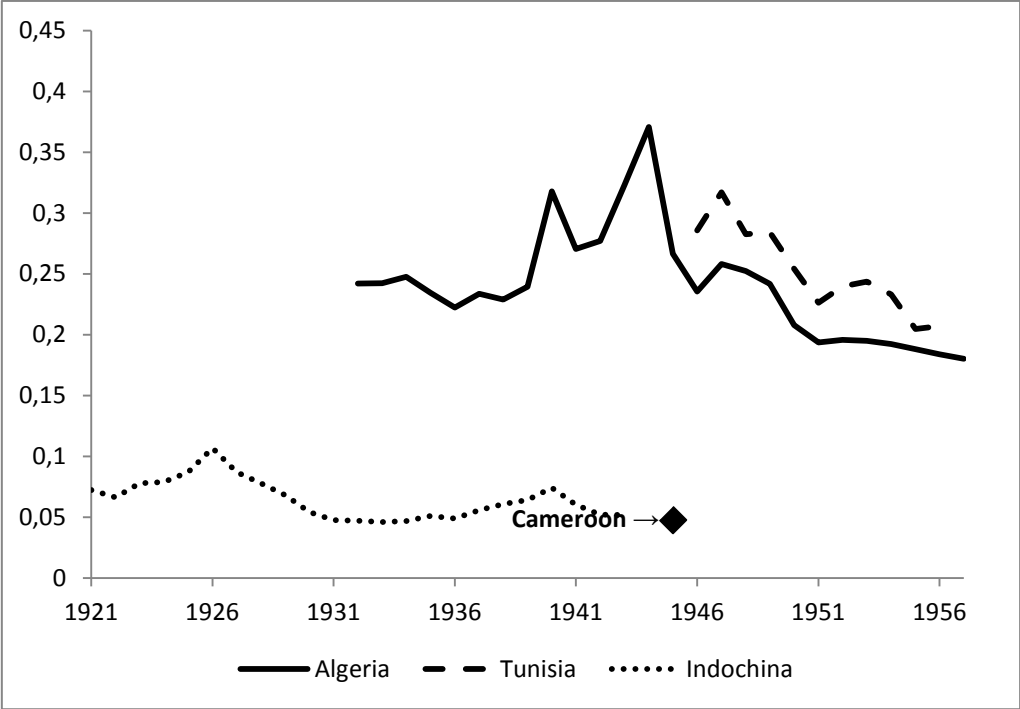
¹⁸ After 1954, large inflows of military soldiers, who are treated as residents in national accounts, tend to distort the representativeness of national income figures, for their extrapolation to the past. More generally, the 1950s are specific in that remittances from Algerian migrants in France already reached a rather high level, and financial transfers from the metropolis were larger than in the past.

We translate the constant franc estimate in current prices using the consumer price index for Brazzaville (capital city of French Congo, the nearest place where price data were collected between 1938 and 1951). We then apply the same ratio of 50% to get household fiscal income.

Indochina

GDP estimates at current prices for Vietnam in the years 1920 to 1952 are from Jean-Pascal Bassino (2000) who generously shared his estimates with us. We assume that Cambodia and Laos have the same GDP per capita as Annam (Center-Vietnam), in order to reconstruct total GDP for Indochina.¹⁹ We then apply the ratio of 50% to get household fiscal income.

Figure 3 – Income per tax unit estimates: ratio to Metropolitan France (nominal)



Sources: see text.

Reading: In 1945, the estimated income per tax unit in Cameroon is around 5% of metropolitan France.

Figure 2 displays the time profile of estimated real GDP per capita.

Algeria and Tunisia are by far the wealthiest colonies. Whatever the date considered, Cameroon and Indochina are three times poorer than North Africa.

In Algeria, GDP per capita decreased by 18% between 1930 and 1950; most of the drop must have occurred during WW2, given the collapse of metropolitan France. Very high growth rates are achieved in the 1950s, in spite of the liberation war starting in 1954, thanks to large infrastructure investments financed by the metropolis.

In Tunisia, growth is positive between 1930 and 1950, and also accelerates after 1950, although to a lesser extent in comparison with Algeria.

¹⁹ Although household income in real terms is not needed to compute top-income shares, we use the Saigon consumer price index for 1920 to 1940 for Southern Vietnam (Cochinchine) and Center-Vietnam (Annam), and the Hanoi consumer price index for Northern Vietnam (Tonkin).

In Cameroon, GDP per capita stagnates until 1946, then large investments from the « *Fonds de d'Investissement et de Développement Economique et Sociale* » (FIDES), mostly financed by the metropolis, generate high annual growth rates (above 7%).

In Indochina, GDP per capita stagnates in the 1920s, and then the Great Depression results in a collapse of rubber and rice international prices, causing a large deflationary crisis in the first half of 1930s. Growth resumes in the second half, but Cochinchine collapses during WW2, according to Jean-Pascal Bassino's estimates.

Figure 3 displays the estimated income per tax unit, as a ratio to the metropolitan France figure, for the colony-time points for which we have income tax tabulations. Before WW2, the metropolis appears three times richer than Algeria, and even more than ten times compared to Indochina (note that here, in contrast with Figure 2, figures are not corrected for differences in price levels). After WW2, France experiences very high growth rates, making it diverge from Algeria and Tunisia, which end up four to five times poorer in the mid-1950s.

5. Results

Top 1% and top 0.1% shares in French colonies

Figure 4 shows our estimation of top 1% shares in Algeria and Tunisia, compared to France, United Kingdom and South Africa.

In Algeria, this share starts from an extremely high 28% in 1932, then slides downward all along the 1930s, and further drops during the Second World War, like in metropolitan France. It then stabilizes around 15% in the 1950s. Measured between 1946 and 1956, the figure for Tunisia is lower, around 13%.

In the 1930s, the top 1% share in Algeria is strikingly close to South Africa. While inequality goes down in the former country, in the latter it booms during the 1940s, because of mineral exports prices (Alvaredo and Atkinson 2007), then decreases in the 1950s yet reaches 20% in 1957, that is 5 percentage points above the Algerian level. In the meantime, the two metropolises France and United Kingdom converge to a top 1% share below 10%.

While Algeria and Tunisia are four times poorer than France, their top 1% shares are “only” 50% higher in the 1950s, meaning that the average income of top-earners is only 30 to 40% of their metropolitan counterparts, as shown in Table 2 (first column).²⁰ In other words, by 1955 the average income of the top 1% in Algeria is only 3.6 times the metropolitan average income, and corresponds to the average income earned by the top 15% richest in France.

The top 0.1% shares depicted in Figure 5 more or less the same story for this group of countries. New figures for pre-WW2 Indochina and post-WW2 Cameroon are also introduced.²¹ In all colonies, the very rich are again relatively less rich than in the metropolis, so that colonial pre-WW2 figures are in fact closer to metropolitan ones for the top 0.1% compared to the top 1%.

²⁰ As South Africa is only twice poorer than UK in the 1950s, according to Alvaredo and Atkinson (2007) estimates, top-income earners appear twice richer by metropolitan standards. The average income of the South African top 1% earners is then 0.8 times the average income of the British top 1%. The South African income total could be overestimated: correction would then push South African top shares upward, above Algeria and Tunisia.

²¹ Top 0.01% shares are shown in Appendix Figure A1.

In the 1920s, the top 0.1% share for Indochina is estimated around 8%, a level that lies in the same range as France, UK and South Africa. Here again, this means that the super-rich Europeans in the colonies are poorer than their metropolitan counterparts: about ten times poorer (in nominal terms) in the case of the French in 1932 Indochina (see Table 2).²² In Indochina, French and European settlers barely make more than 0.1% of population, so that the top 0.1% share actually reflect the average income of Europeans compared to autochthons (see also middle panel of Table A2 in Appendix). Expatriates in Indochina earned on average the mean income of the top 5% in 1920 France.

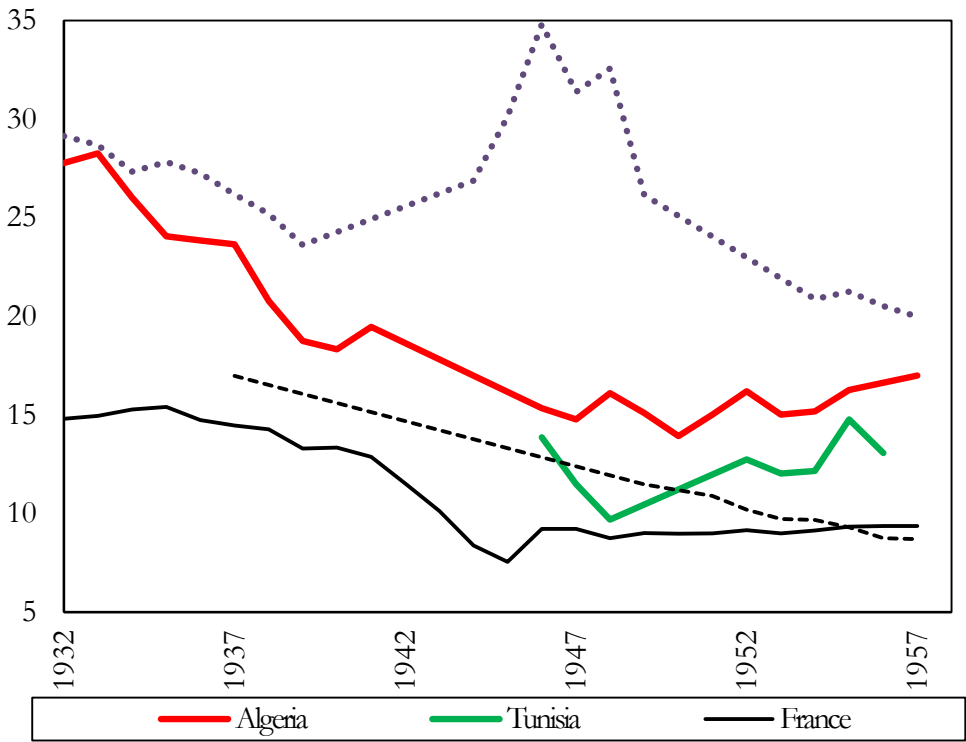
The settlers seem to have been preserved from the deflation and economic collapse of the 1930s, following the Great Depression and the fall of rice and rubber prices, so that their share in total income jumps upward to 12% before to fall back to pre-crisis levels at the end of the 1930s.²³ This is puzzling, as historical accounts of this period tell stories of bankruptcies for many French firms in Indochina (Brocheux and Hémerly 2001; Brocheux 2009). While income tax tabulations indeed show a decrease in the average income of European tax payers, in nominal terms and even in real terms at consumer prices (despite deflation), this decrease is much less pronounced than the fall of GDP in Bassino's estimates. It is not impossible that poor Indochinese rice producers suffered more from the collapse in rice prices and exports than wealthy European settlers.

Like in Indochina, the top 0.1% share for 1945 Cameroon also reflects the income of the average European settler compared to the African average, or perhaps of the 70% richest settlers, according to Table A2 in Appendix. The former is then estimated at 73 times the latter. This figure is almost double the one of 1946 Tunisia, however in Tunisia the top 0.1% richest only make 12 to 13% of the French settlers (see Table A2 bottom panel). In Cameroon, the few French settlers were just as rich as the 2.5% richest metropolitans in the same year.

²² This ratio would be adjusted downward if we took into account differences in price levels, as in Figure 2.

²³ Figures for the years after 1937 are less reliable: income tabulations no longer provide for income total within income brackets, and the income scale is less refined (only five brackets versus ten in the previous years).

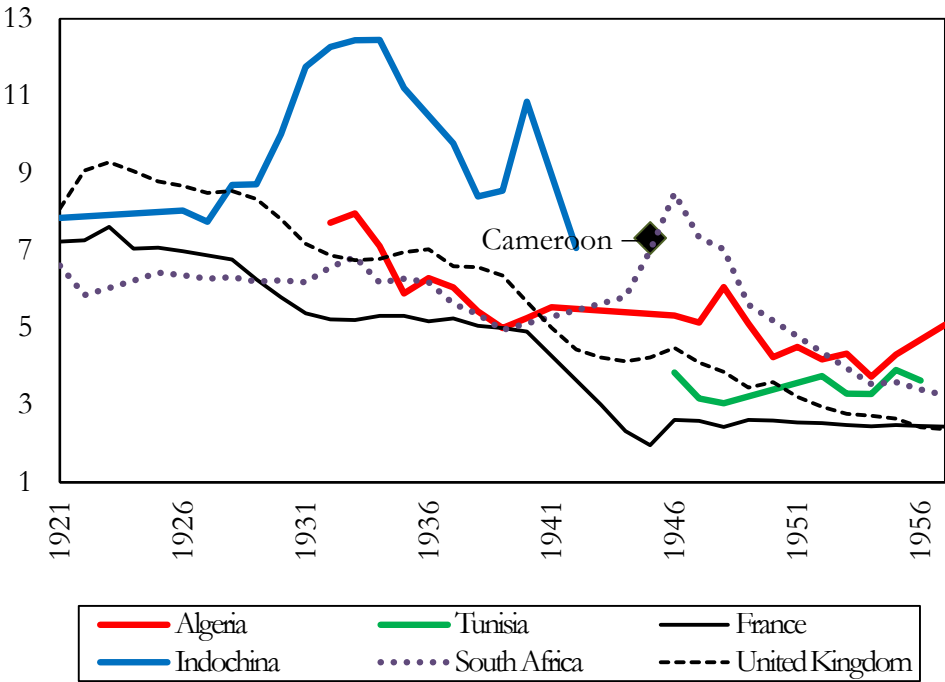
Figure 4 –Top 1% share in Algeria and Tunisia, compared to France, UK and South Africa



Sources: see text.

Reading: The share of the richest 1% in Algeria is estimated at 15.9% of total income in 1947.

Figure 5 –Top 0.1% share in French colonies compared to France, UK and South Africa



Sources: see text.

Reading: The share of the richest 0.1% in Algeria is estimated at 5.5% of total income in 1947.

European settlers

For sure, in the two colonies where settlers were very few, the average European was richer than the average “*piéd-noir*” in Algeria, Tunisia, or the average white in South Africa. According to the 1948 population census in Algeria, among the 331,595 non-Muslims who are economically active, two thirds (219,714) are classified as blue collars or low-rank white collars (“*ouvriers, employés, cadres inférieurs*”). In the social table established by Samir Amin for Algeria and Tunisia in 1955 (see Table A3 in Appendix), blue collars and low-rank white collars weigh 50% in Algeria, and 46% in Tunisia, while small business managers and middle-rank white collars represent an additional 33 and 38% respectively.

The 1937 census of Europeans in Indochina unfortunately does not provide much detail on occupational ranks and skills. Civil servants make 40% of the 9,730 occupied civilians (even 71% when including military soldiers), 12% are classified as professionals (“*profession libérale*”) and 15% are in trade (“commerce”). In 1938 Cameroon, 30% of the 1,944 male Europeans are civil servants, another third are traders (“*commerçants*”), 10% run a plantation (“*planteurs*”) and another 10% are missionaries.

Given these differences, perhaps the top 1% in Algeria or Tunisia is more comparable to the top 0.01% in Indochina or Cameroon. The top 0.01% in Indochina represents the richest 9% of Europeans there (8.6% more precisely, see bottom panel of Table A2). In 1932, it earns around 12 times the French average income (Table 2). In contrast, if the top 1% in Algeria was only composed of “*piéd-noirs*”, it would represent the 7% richest (7.4% more precisely, see Table A2 bottom panel); perhaps a bit less if we include in this top 1% a few Algerians, that must be no more than 10% of the total in 1932.²⁴ These top rich “*piéd-noirs*” only earn 8.7 times the metropolitan average income. The remaining difference ($12.6/8.7 = 1.4$) is in favor of Indochina.²⁵ This difference could reflect many factors: better profit opportunities, a selection effect linked to distance (Indochina is further away from the metropolis), a risk premium linked to distance or worse health conditions (malaria),... but also merely differences in price levels, as we have indications that the exchange rate of the piaster (the silver-based currency of Indochina) was far from the purchasing power parity with the franc zone. We finally conclude that top-rich European settlers in Indochina enjoyed a similar standard of living as their counterparts in Algeria.²⁶

The same kind of comparison can be replicated more accurately with Cameroon and Tunisia in 1945-46. The top 0.01% in Cameroon is only composed of Europeans (124 households in total, see more thereafter), so that it should represent the 7% richest European settlers there (see bottom of Table A2 again). On the side of Tunisia, we have a separate tabulation for Europeans so that we can compute the average income of the 7% richest “*piéd-noirs*” there; we find it reaches 5.7 times the French metropolitan income in 1946. The income ratio between these two groups is $8.9/5.7=1.6$. If we alternatively consider the whole population of European tax payers in Tunisia, they are estimated to represent 20% of total European tax units, and earn 2.5 times the French average income. If we compare them to the 20% richest Europeans in Cameroon (360 tax units), who earn 5.7 times the French average, we get a ratio of 2.3. In Algeria, the top

²⁴ The figure for 1946 Tunisia is 20%, see thereafter.

²⁵ A more accurate computation for the top 5% Europeans in Indochina, that we assume to correspond to 0.8% of Algerian tax units (assuming that almost no Algerians earn such high incomes in 1932), provides a very similar estimate of 1.3.

²⁶ Of course, if we reason in absolute numbers, i.e. compare the richest 5,000, 1,000 or 500 Europeans on each side, then Algerian settlers appear richer by a factor of 2.1 to 3.7.

1% again represents 7.4% of Europeans if Algerians make only a negligible fraction of it (Table A2). The income ratio of Cameroon to Algeria for the 7% Europeans would then reach $8.9/4.7 = 1.9$, according to Table 2.

Rather surprisingly, and in contrast with Indochina in the 1930s, the richest Europeans in 1945 Cameroon look definitely richer than their counterparts in Algeria or Tunisia. However they are only few individuals (not more than 500). If we instead compare the 1000 or 200 richest individuals on each side, then the advantage is reversed towards Algeria and Tunisia (with a ratio of income around 2.5).

Table 2 – Ratio of top-earners' average income to metropolitan levels

Metropolitan:	Top 1%		Top 0.1%		Top 0.01%	
	Top 1%	Average income	Top 0.1%	Average income	Top 0.01%	Average income
Algeria 1932	0.6	8.7	0.5	24.1	0.4	73.1
Indochina 1932	-	-	.11	5.8	.07	12.6
South Africa 1932 ^(a)	-	-	0.3	23.9	0.3	74.5
Algeria 1946	0.5	4.7	0.6	16.1	1.1	56.7
Tunisia 1946	0.4	4.0	0.4	11.0	0.6	33.0
Cameroon 1945	-	-	.18	3.5	.15	8.9
South Africa 1946 ^(a)	-	-	0.8	37.9	0.9	112.2
Algeria 1955	0.4	3.6	0.4	9.6	0.4	28.4
Tunisia 1955	0.3	3.0	0.3	8.0	0.3	19.3
South Africa 1955 ^(a)	0.8	7.0	0.7	17.4	-	-

Sources: Authors' calculations.

Reading: In 1932, the average income of top 1% in Algeria is 0.6 times the average income of top 1% in France, and 8.7 times the average income per tax unit in France.

(a): South African figures are ratios to United-Kingdom levels.

Inequality among settlers was limited. Assuming like Samir Amin that the average European earned about eight times the average Muslim in Tunisia in the 1950s, we estimate income inequality within the European population and find that the 10% richest Europeans earn between 23 and 33% of total European income, depending on the year that is considered (see Figure A2 in Appendix).²⁷ The top 1% share ranges between 7 and 9% only, and the top 0.1% between 1.9 and 2.4%. Those shares are lower than metropolitan France in the same years.

Data for 1956 provides for the distribution of tax payers' occupations by income bracket. Among those who belong to the top 1% (in total population, hence top 10% of Europeans), around 70% of European tax payers are salaried workers, 8% are retired, the remainder being evenly distributed among traders, professionals and farmers. In the top 0.1% (top 1% of Europeans), only 48% are salaried, and 1% are retired, so that more than 50% are non-salaried, again evenly distributed between traders, professionals and farmers.

In Indochina, we can rather safely assume that European tax payers as recorded in tax tabulations make the bulk of all civilians (see table A2 in Appendix); hence total declared income

²⁷ Nicolai (1962) rather refers to a ratio of 4 times, but this seems to be for urbanites only. We actually need to make an additional assumption regarding Tunisian Jews, as Amin's estimate is for non-Muslims. We assume that the average income of Tunisian Jews is the same as Europeans'.

must not be far from total fiscal income of civilians. We then estimate income inequality within Europeans without using any external data (see Figure A3). We find that the 10% richest Europeans earn between 24 and 31% of total European income, again depending on the years. This figure is very close to the Tunisian estimate. The top 1% share lies below 7%, which is even lower than the Tunisian share.

In summary, top-rich French and European settlers enjoyed the living standard of the top-rich metropolitans, but only “relatively”. While their share in the colony’s income exceeded the one of their French counterparts, they earned much lower incomes, by a factor of 0.2 to 0.6, as shown by Table 2.²⁸ In that respect, figures are remarkably consistent across periods and colonies, except just after WW2 (year 1946 in Table 2), when French metropolitan incomes were very depressed, especially at the top where many fortunes had been wiped out by the war and by inflation. Another exception is white South African settlers compared to UK residents, not in the 1930s but in the 1940s and 1950s: thanks to the high level reached by the prices of mineral exports, the top 10%, 1% or 0.1% white South Africans could then earn incomes very close to their British counterparts (ratios ranging between 0.7 and 0.9, perhaps a bit higher if PPP adjusted).

In absolute terms, the richest decile of settlers earned around 9 to 13 times the metropolitan average income in the 1930s, in Indochina or Algeria. However, as metropolitan income grew, especially in France after WW2, the colonial “bonus” tended to decrease: in the mid-1950s; in Algeria and Tunisia they could only expect to earn 3 to 4 times the metropolitan income.

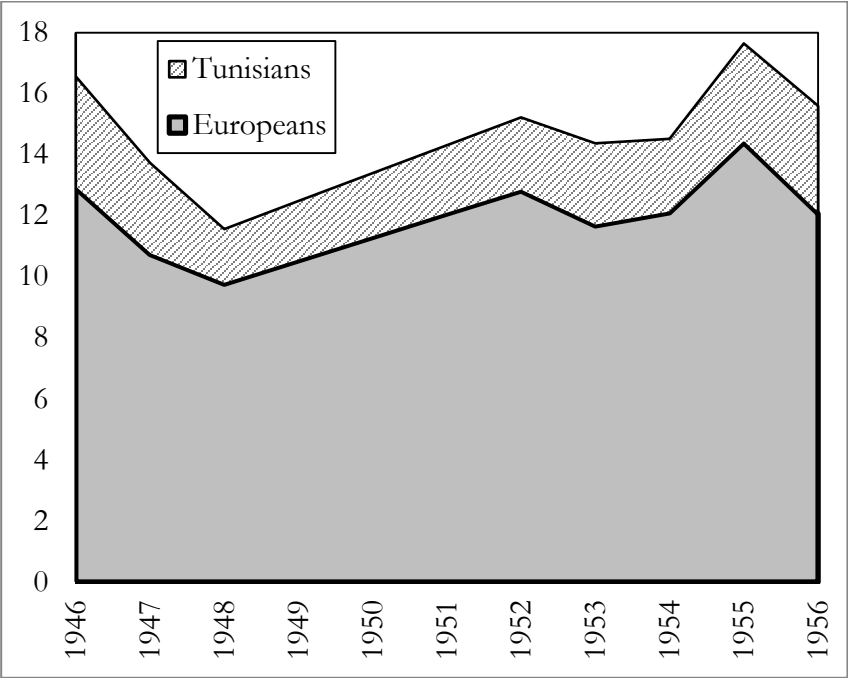
Were there rich autochthons?

In Tunisia between 1946 and 1955, Europeans made more than 74% of all tax payers. The share of registered Tunisians actually increases from 20% in 1946 to 23% in 1953, and then reaches 26% in 1955. In the years 1955 and 1956, at the turn of independence, the number of registered Tunisians increases by 34% each year, while the number of Europeans (renamed “foreigners” in the income tax tabulations for 1956) slightly decreases in 1956, so that the share of Tunisian tax payers culminates at 38% in 1956. As said, European settlers in Tunisia are not too rich, and a few Tunisians are also rich enough to be eligible for taxation.

Between 1946 and 1954, we estimate that rich Tunisians make around 20% of the top 1%, as well as of the top 0.1%. They earn around 20% of the top 1% income pie, as shown in Figure 6, meaning that those rich Tunisians are as rich on average as the rich Europeans. In 1956, their population share jumps a bit to 24% and their income share to 23%. These shares are definitely higher than the ones found for South Africa by Alvaredo and Atkinson (see Figure A4), suggesting that despite similar levels of inequality, the racial divide was not as acute in colonial Tunisia than in apartheid South Africa. However, in Tunisia Jews made a significant minority group concentrated in cities on average much richer than Tunisian Muslims. In 1956, Tunisian Jews represented 18% of non-Muslims, so that it would be demographically possible that they make the majority of non-European top-income earners.

²⁸ Settlers in Indochina look even poorer by a factor of 0.07 to 0.11, although here some PPP adjustment should correct these figures upward.

Figure 6 – Respective shares of Europeans and Tunisians in the top 1%



Sources: see text.

Reading: In 1947, the top 1% income share was 13.7%, in which rich Europeans earned 10.7% and rich Tunisians 3.0%.

For the year 1956, disaggregate data on tax payers’ occupations show that 61% of Tunisians belonging to the top 1% are salaried, 18% are traders, 8% farmers and 7% professionals. Among the top 0.1% income earners, the share of salaried worker drops to 23% and the modal occupation becomes trade (46%), while professionals (12%) and big farmers (8%) make the rest.

Figure A5 in Appendix presents tentative estimates for the income distribution among Tunisians. Inequality is estimated to be higher among Tunisians than among Europeans, with the top 1% reaching 11% in 1955-56, and the top 0.1% lying between 2% and 3% depending on the years considered. Like for the estimates on Europeans alone (Figure A2) that we already discussed, these estimates again rely on Samir Amin’s estimate for the relative incomes of the two groups, and an additional assumption that we must make for Tunisian Jews (see above). If Tunisians were actually richer (resp. poorer) on average, income inequality would appear lower (resp. higher).

Data on other colonies make it more difficult to estimate inequality among autochthons.

In 1945 Cameroon, due to the existence of a means-tested lump-sum tax dedicated to registered rich indigenous, African tax payers make 89% of registered tax payers. However their declared income distribution very little overlaps with Europeans. Over 9,967 African tax payers, only 22 declare incomes that lie above the minimum eligible income for Europeans (60,000 francs). This means that Africans make a negligible share of the top 0.1%. We estimate the total number of Europeans to lie around 3,600 in 1945; if we consider that 75% of this total is above 15 years of age, and take 60% of the 15+ population as an estimate of the number of tax units, we expect to have 1,700 European tax units. The income tax tabulations report 1,203 European tax payers,

making 70% of our estimate (see Table A2 in Appendix). Then, if we assume that our estimate of total household fiscal income is correct, and that the great majority of Europeans is given by the tabulations, we can compute top shares among Africans. We obtain rather low figures: 5% for the top 1% and 1.2% for the top 0.1%. We conclude that rich Africans reported income is very seriously underestimated, or else that our total income in Cameroon is very much overstated.

Starting in 1937, non-Europeans become eligible to the income tax in Cochinchine (extreme-South Vietnam, Mekong delta). It is also in principle the case in 1938 Cambodge, and 1939 Annam and Laos, but tables never provide the breakdown between Europeans and non-Europeans, and the total numbers of taxpayers increase very little, so that one can doubt that coverage extension was ever implemented. In 1941 Tonkin, a few Chinese and other Asians then appear in income tax tabulations.

This makes that it is only in Cochinchine for incomes earned after 1937 that we are able to identify a significant number of non-European taxpayers. While Cochinchine was only 20% of Indochina in terms of population, it was by far the richest part earning twice the Indochinese average income, and it concentrated more than 40% of Europeans as well as attracted many Chinese immigrants. For the years 1937 to 1939, non-Europeans represent around 30% of the total number of top 0.1%; for the year 1940, their absolute number suddenly jumps putting their share to 47%, then falls down again after that year. There are obviously large variations in income tax coverage and enforcement that should make us very cautious. If we consider the year 1940 where coverage is maximal both for Europeans and non-Europeans, the latter not only weight 47% of the top 0.1% but also 42% of total income in this group, suggesting they rich autochthons are no less rich than rich Europeans. Chinese and other foreign Asians take 14% in this pie share, meaning that Indochinese proper get 28%. This puts the 0.1% income share among Autochthons at 6.4%, a much higher share than Tunisia.

Another comparator is offered by colonial India, as analyzed by Banerjee and Piketty (after 1922), then by Alvaredo, Bergeron and Cassan (2017) for the 1885-1946 period. Income tax tabulations do not distinguish Europeans from Indians; however, the demographic weight of the former is so low that they cannot represent more than 2% of the top 0.01% in 1921. Hence the top shares figures can be deemed to describe inequality among Indians. From 1885 to 1939, the top 0.1% share is estimated to range between 6 and 9%, while the top 0.01% lies between 1.8 and 3.4%.²⁹ This puts inequality in colonial India at a high level, very much in line with our estimate for 1940 Cochinchine, and much higher than Tunisia.

French and British settlers in Africa

Atkinson's (2014) estimates of top income shares in British colonies of Africa cover many other countries outside of South Africa: Ghana (former Gold Coast) and Nigeria in West Africa, Kenya, Uganda, Tanganyika and Zanzibar in East Africa, Malawi (former Nyasaland), Zambia (North Rhodesia), and Zimbabwe (South Rhodesia) in Austral Africa. Most income tax tabulations start being published after WW2, and in some cases are available until the 1970s.

This allows us to put Algeria, Tunisia and Cameroon in comparison with the ten British colonies between 1945 and 1960. In terms of top 0.1% shares, Zimbabwe, Zambia, Kenya and Tanganyika stand out as the most unequal colonies (see Figure A6 in Appendix). The two former

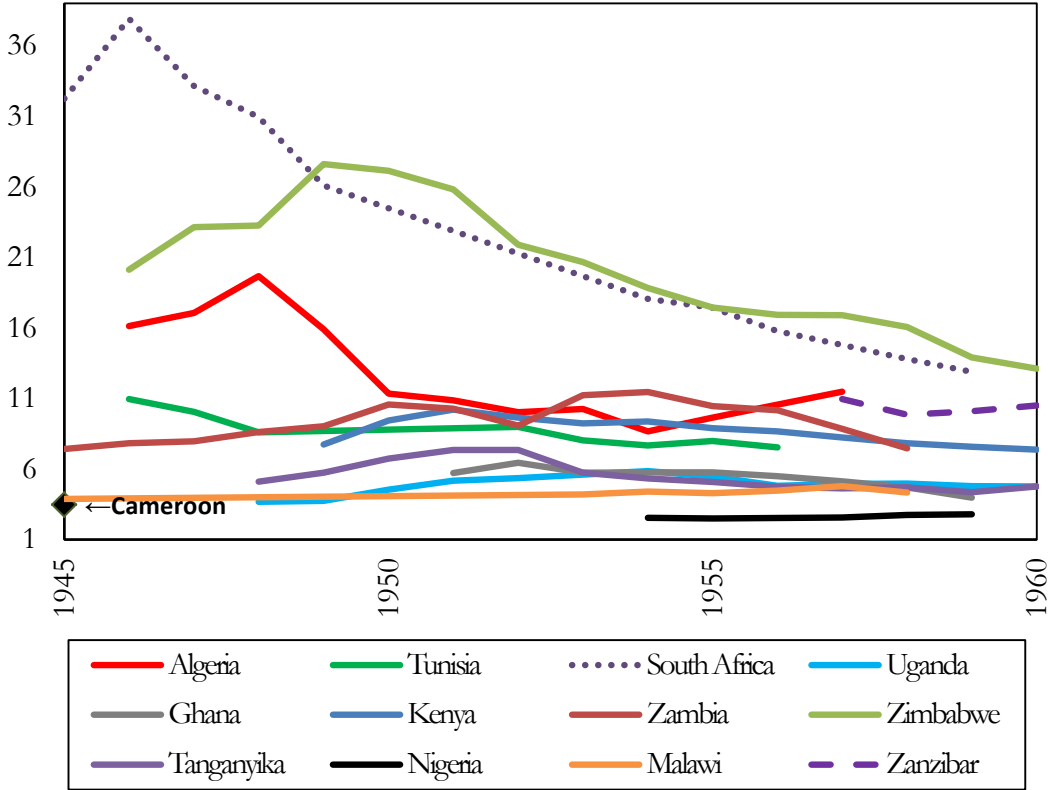
²⁹ The time profile of these shares is shown to follow a U-curve pattern; see Alvaredo, Bergeron & Cassan 2017.

Rhodesias reach levels as high as 11 to 13%, during the mineral boom of the 1940s. From that standpoint, inequality in Algeria, Tunisia and Cameroon is just average, closer to Atkinson’s estimates for Uganda, Malawi or Zanzibar, while above the least unequal Ghana and Nigeria.

Yet, such a ranking is highly sensitive to income total estimates which are plagued by many uncertainties (e.g., Jerven 2013). As the top 0.1% is mostly composed of French and British settlers, we prefer to compare the average income of top 0.1% in terms of metropolitan average income, as we already did in Table 2 above. Further, such a comparison clearly and strikingly separates three types of colonies.

South Africa and Zimbabwe (South Rhodesia at that time) make the first type. They start from very high levels in the end-1940s, above 30 in South Africa and above 20 in Zimbabwe, and then at par with UK’s top 0.1% average income; then they gradually decline but remain above 13 times UK average income in 1960, that is the average income earned in UK’s top 0.5% in the 1950s (when the top 0.1% was at 24). It seems very telling that these two colonies were those which implemented segregationist “separate development policies”, better known as Apartheid in South Africa. At that moment, rich white settlers likely felt that they had much to lose in sharing income with black Africans.

Figure 7 – French and British settlers 1945-60: top 0.1% compared to metropolitan average



Sources: Authors’ calculations from Atkinson (2014) and source data for the present paper.

Note: Ratio of top 0.1% average incomes to metropolitan average income.

Algeria, Tunisia, Zambia (South Rhodesia), and Kenya make the second type. These four colonies had a rather high number of European settlers, whose share in population was very much above 0.1%, so that the top 0.1% corresponds to the richest among them. Top 0.1%

average income lie between 7 and 11 times average metropolitan income, corresponding to the average income of the top 1% in the metropolises in the 1950s (see Figure A7 in Appendix for a zoom of Figure 7 where South Africa and Zimbabwe are withdrawn).³⁰ In all of them, however, the majority of white settlers left the country after independence, either swiftly like for Algeria in 1962, a bit more gradually for Tunisia after 1956 and for Kenya after the Mau Mau uprising (1952-1960) and independence (1963), and even more in the case of Zambia (2% of population in 1960, less than 0.2% today).³¹ Zanzibar is kind of an outlier in this group: in its case, rich Arab merchants, aside to British settlers, most likely helped in bringing the top 0.1% to this medium level.³²

Lastly, Cameroon, Ghana, Nigeria, Malawi, Uganda and Tanganyika make the third type. In their case, European settlers never made more than 0.2% of population, so that the top 0.1% is close to be an exhaustive sample. It is still the case today. The average British or French settler was certainly richer than the average settler in the two other types, but was nonetheless not very rich. The average income of the top 0.1% lies between 2.8 (Nigeria) and 7.3 (highest Tanganyika point in 1951) times the average metropolitan income, and most usually below 6, hence just a little above the average income of the top 5% in the metropolises.

6. Conclusion

Using income tax tabulations extracted from French administrative archives, we produce estimates for income inequality in four French colonies between 1920 and 1957, as measured by top-income shares.

We show that income inequality was high in the colonies and higher than in the metropolis, especially after WW2 when inequality had declined very much in the latter.

European settlers made the great majority of income tax payers. They were rich, but not extremely rich by metropolitan standards. While metropolitan France is three to four times wealthier than its North African colonies, top-income settlers are just twice poorer than top-income metropolitans. Besides, inequality among settlers in a given colony was limited. Across colonies, top-rich settlers do not seem to differ very much in living standards.

These colonies were not lands of very high profits, or else these profits were not captured by settlers living there. Further, migration to the colonies was more the fact of average people who were rich enough only relatively to autochthons, and often in search of social revenge or a second chance in life.

Available data provide only a few insights on the inequality within the autochthons, because only a minority was rich enough, compared to Europeans, to be eligible to the income tax. Rich Tunisians made one fifth of the top-rich in the 1950s, while black Africans are absent from the top-quantiles in South Africa, yet a large share of rich Tunisians could have been Jews, who also left the country after independence.

³⁰ One exception already discussed being Algeria before 1948, given the low level of French income just after WW2. The 1948 point is also most likely an outlier in the income tax tabulations.

³¹ Many white Zimbabweans also left the country after its formal independence in 1980 and the devolution of power to blacks, hence much later after the colonial era here covered.

³² Zanzibar (UK protectorate between 1890 and 1963) was merged with Tanganyika (former German colony and former mandate territory of United Kingdom since WW1, independent in 1961) to form Tanzania in 1963, after a revolution had overthrown the Sultan.

Finally, rich settlers in Algeria and Tunisia were significantly less rich than rich white South Africans or Rhodesians, by metropolitan standards, and closer to rich whites in Kenya or Zambia. The average French settler in 1945 Cameroon compared well with British settlers in Ghana, Nigeria or Uganda.

Further research should allow making more accurate comparisons of the income distribution of settlers in French and British colonies, making use of more precise data on their demographics (number, age structure, household composition, place of birth). We also hope to be able to say more on the characteristics of rich autochthons, and on how the income distribution among autochthons interacted with that of settlers.

Sources

Main sources on income tax tabulations and population:

Annuaire Statistique de l'Algérie, various years.

Annuaire Statistique de l'Indochine, various years.

Annuaire Statistique de la Tunisie, various years.

Ministère de la France d'Outre-Mer, 1947. *Annuaire Statistique du Cameroun 1938-1945, volume I*. Paris : Imprimerie Nationale.

Additional sources on population

Banens, Maks, 2000. "Vietnam : a reconstitution of its 20th century population history" in : Bassino, Giacometti, Odaka, *Vietnam Economic History*, Tokyo, Hitotsubashi University, pp 1-45.

CICRED, 1974a. *La population de l'Algérie*.

CICRED, 1974b. *La population de la Tunisie*.

Sources on national income

Bassino, Jean-Pascal, 2000. "Preliminary estimates of Vietnam GDP 1800-1970: North-South economic divide in historical perspective. International research workshop on Asian historical statistics database, 7-8 January 2000.

Direction des Affaires économiques et du Plan du ministère de la France d'outre-mer, 1955. "Essai de détermination du revenu national des principaux territoires d'outre-mer en 1947 et en 1953", Paris. [Cameroon]

Statistique générale de l'Algérie, *Tableaux de l'économie algérienne*, 1958.

Royaume du Maroc, 1960. *Tableaux économiques du Maroc 1915-1959*, Ministère de l'Economie Nationale, Division de la Coordination Economique et du Plan, Service Central des Statistiques.

Zarka, Claude, 1964. « L'économie tunisienne à l'heure de la planification impérative », in *Annuaire de l'Afrique du Nord*, Paris : Editions du CNRS, 1964, pp. 207-241, Vol. 1 (1940 p.).

Legal sources on income tax

Algeria

République française, Gouvernement général de l'Algérie, 1928. « Circulaire relative à l'établissement des impôts sur les revenus (Circulaire n°102 du 30 avril 1928) ». Direction des services financiers, Service des contributions directes. Alger : Ancienne Maison Bastide-Jourdan et Jules Carbonel.

République française, Gouvernement général de l'Algérie, 1935. « Recueil des textes réglementaires concernant l'assiette de l'impôt sur le revenu, en Algérie – Année 1935. » Alger : Imprimeries « La Typo-Litho » et Jules Carbonel réunies.

République française, Gouvernement général de l'Algérie, 1938. « Recueil des textes réglementaires concernant l'assiette de l'impôt sur le revenu, en Algérie – Année 1938. » Alger : Imprimerie Imbert.

Gouvernement général de l'Algérie, 1947 and 1955. *Code algérien des impôts directs et taxes assimilées*. Imprimerie officielle du gouvernement général de l'Algérie.

Délégation générale du gouvernement en Algérie, 1959. *Code algérien des impôts directs et taxes assimilées*, Imprimerie officielle.

Tunisia

Louët, Th., 1927. *Les impôts directs en Tunisie*, Thèse pour le doctorat en droit de l'Université de Lyon, Tunis : Société Anonyme de l'Imprimerie Rapide.

Régence de Tunis, Protectorat français, 1951. « Recueil de la législation relative aux impôts ressortissant de la direction des impôts personnels et sur les revenus en Tunisie ». Tunis : Imprimerie SAPI.

Journal Officiel Tunisien, various dates, 1930-1957.

Indochina

To-Van Qua, Secrétaire du gouvernement de la Cochinchine, 1924. « Répertoire des textes réglementant les divers impôts directs perçus en Cochinchine », Saigon : Imprimerie de l'Union Nguyen Van-Cua.

To-Van Qua, Secrétaire du gouvernement de la Cochinchine, 1930. « Répertoire des textes réglementant les divers impôts directs et taxes assimilées perçus en Cochinchine », Saigon : Imprimerie de l'Union Nguyen Van-Cua.

Exposition coloniale internationale Paris 1931, Indochine Française, Section d'Administration générale, direction des finances, 1930. *Les impôts directs en Indochine*. Hanoi : Imprimerie d'Extrême-Orient.

Journal Officiel de l'Indochine, various dates, 1930-1957.

Cameroon

Journal Officiel du Cameroun, various dates, 1937-1941.

Bibliographical references

- Alvaredo, Facundo, and Anthony B. Atkinson, 2007. "Colonial Rule, Apartheid and Natural Resources: Top Incomes in South Africa 1903-2007", CEPR Public Policy WP No. 8155.
- Alvaredo, Facundo, Augustin Bergeron, and Guilhem Cassan. 2017. Income concentration in British India 1885-1946. *Journal of Development Economics* 127: 459-469
- Amin, Samir. 1966. *L'économie du Maghreb*, Paris : Editions de Minuit.
- Atkinson, Anthony.B. and Thomas Piketty (eds), 2007. *Top Incomes Over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries*. Oxford University Press.
- Atkinson, Anthony.B. and Thomas Piketty (eds), 2010. *Top Incomes. A Global Perspective*. Oxford University Press.
- Anthony B. Atkinson & Thomas Piketty & Emmanuel Saez, 2011. "Top Incomes in the Long Run of History," *Journal of Economic Literature* 49(1): 3-71.
- Atkinson, Anthony B., 2014. "The colonial Legacy. Income inequality in Former British African Colonies". WIDER WP 2014/045.
- Brocheux, Pierre et Daniel Hémerly, 1994 [2nd ed. 2001]. *Indochine, la colonisation ambiguë 1868-1954*, Paris : La Découverte.
- Cogneau, Denis, Yannick Dupraz & Sandrine Mesplé-Somps, 2017. "Public Finance and Investment in the French Colonial Empire 1870-1960", mimeo PSE.
- Fargues, Philippe, 1986. « Un siècle de transition démographique en Afrique méditerranéenne 1885-1985 ». *Population* (French Edition), 41(2), 205-232.
- Frankema, Ewout, 2010. "The colonial roots of land inequality: geography, factor endowments, or institutions?" *Economic History Review* 63(2): 418-451.
- Frankema, E. and Jerven, M., 2014. 'Writing History Backwards and Sideways: Towards a Consensus on African Population, 1850-present' *Economic History Review* 67, S1.
- Jerven, Morten, 2013. *Poor Numbers: How we are misled by African development statistics and what to do about it*. Ithaca & London: Cornell University Press.
- Milanovic, Branko, Peter H. Lindert, Jeffrey Williamson J, 2007. "Measuring Ancient Inequality". NBER WP 13550.
- Nicolai, André, 1962. "Tunisie : fiscalité et développement", *Tiers-Monde* 3(11) : 429-478.
- Williamson, Jeffrey G., 2010. "Five Centuries of Latin American Inequality". *Revista de Historia Económica / Journal of Iberian and Latin American Economic History* (Second Series) 28(S2): 227-252.
- Williamson, Jeffrey G., 2015. "Latin America Inequality: Colonial Origins, Commodity Booms or a Missed 20th century levelling?" NBER WP 20915.

Table A2 – European settlers in income tax data

	1932	1946	1955
Europeans in total tax units (%)			
Algeria	15,7%	13,5%	12,7%
Tunisia	9,2%	8,9%	8,0%
Indochina	0,13%	0,10%	
Cameroon		0,14%	
European tax payers to estimated number of European tax units (%)			
Algeria			
Tunisia		19.7%	33.1%
Indochina	89.1%	102.0%	
Cameroon		70.5%	
0.1% of tax units as % of Europeans			
Algeria	0.64%	0.74%	0.79%
Tunisia		1.13%	1.26%
Indochina	86.4%	87.7%	
Cameroon		70.0%	

Sources: See text; authors' calculations.

Notes: Data for Cameroon is for 1945. Data for Indochina are for 1932 and 1942 (not 1946).

Table A3 – Samir Amin's social table for Algeria and Tunisia for 1955

	Algeria		Tunisia	
	Number (000)	Income per head (000 francs)	Number (000)	Income per head (000 francs)
Muslims				
Small farmers	210	60	80	90
Medium famers	210	200	105	150
Large farmers	50	560	45	450
Agricultural laborers				
Permanent	100	100	25	120
Non-permanent	500	40-60	110	60-70
Blue collars	225	150	118	160
Low rank white collars	90	270	35	300
Small business managers and middle-rank executives	135	270	53	300
Executives and managers	7-8	1000-1500	2-3	1000-1500
Non-muslims				
Non-muslim farmers	33	2800	6	2800
Blue collars	88	400	16	400
Low rank white collars	80	530	21	530
Small business managers and middle-rank executives	110	1150	31	1150
Executives and managers	27	3000	8	3000

Source : Samir Amin, 1966. *L'économie du Maghreb*, Paris : Editions de Minuit. Pages 130 & 136 for rural households, pages 155-157 & 166-167 for urban.

Figure A1 – Top income 0.01% shares

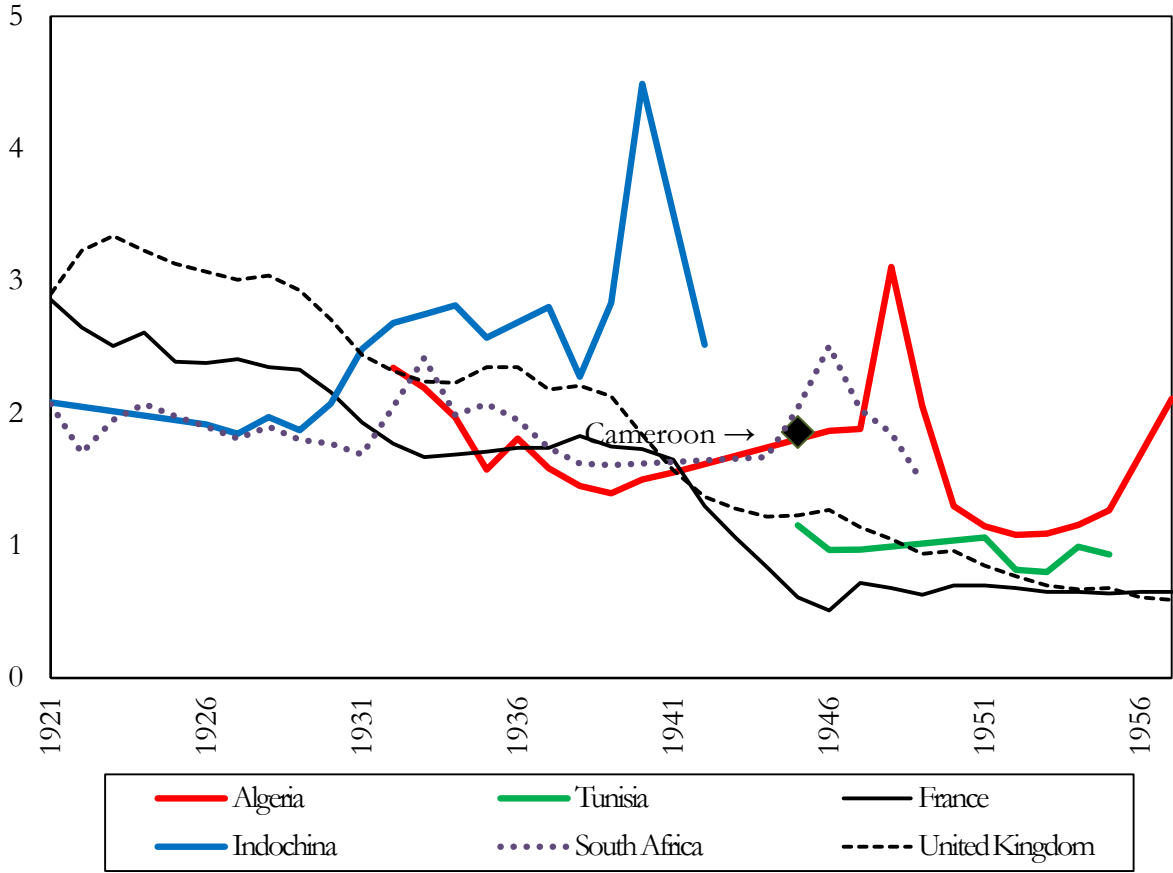


Figure A2 – Top income shares within Europeans in Tunisia 1946-1956

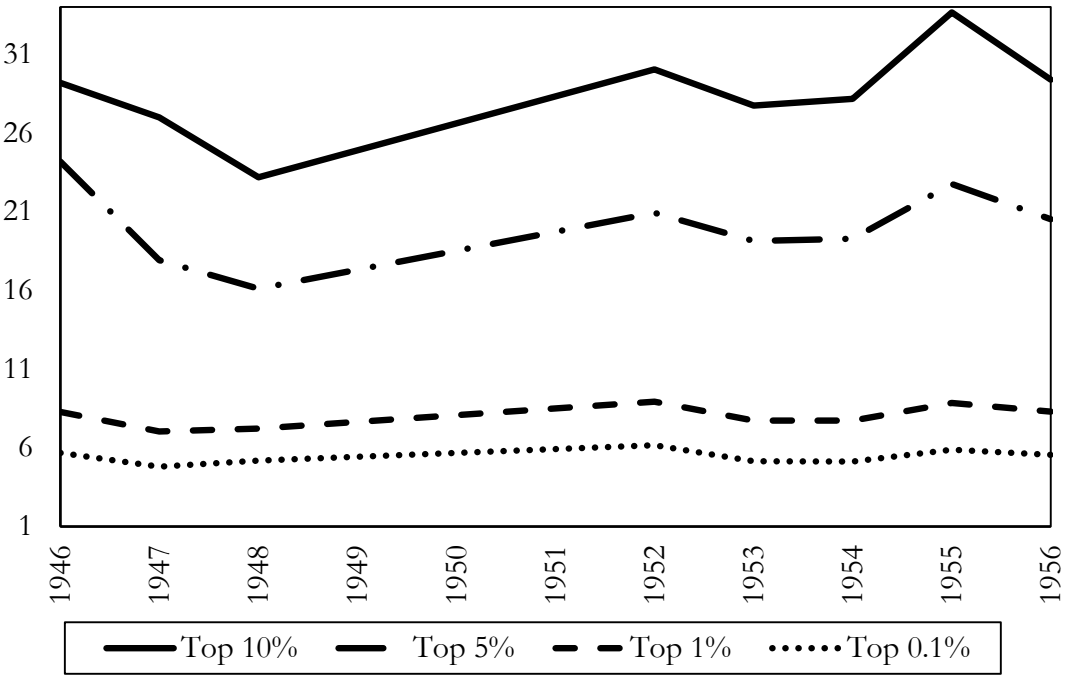


Figure A3 – Top income shares within Europeans in Indochina 1921-1943

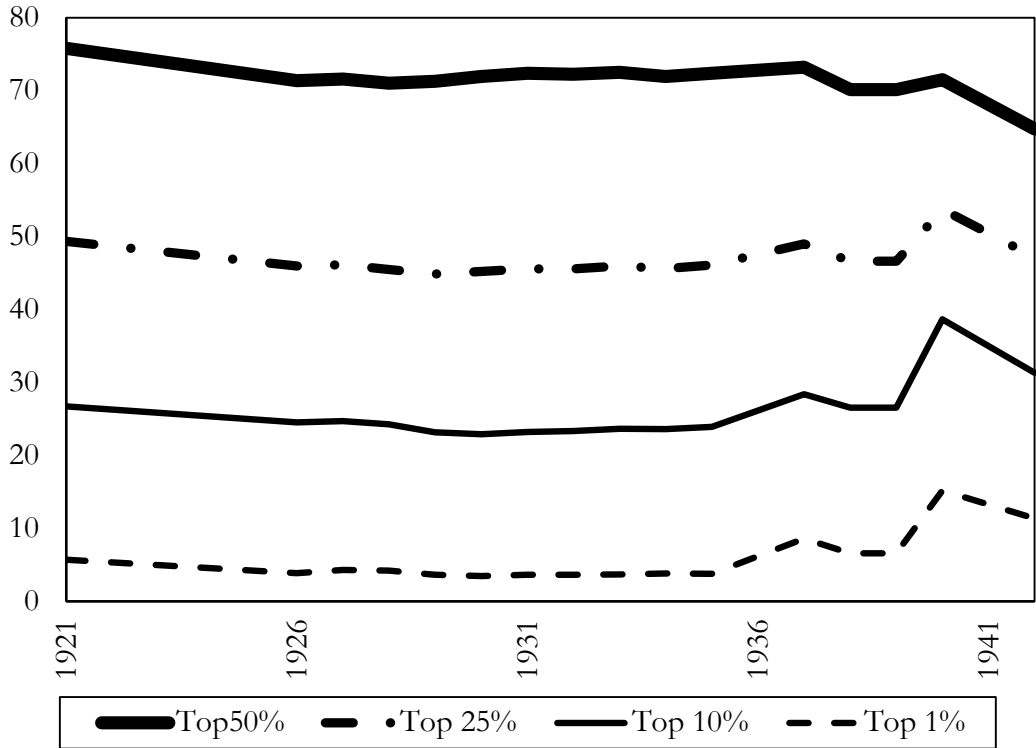
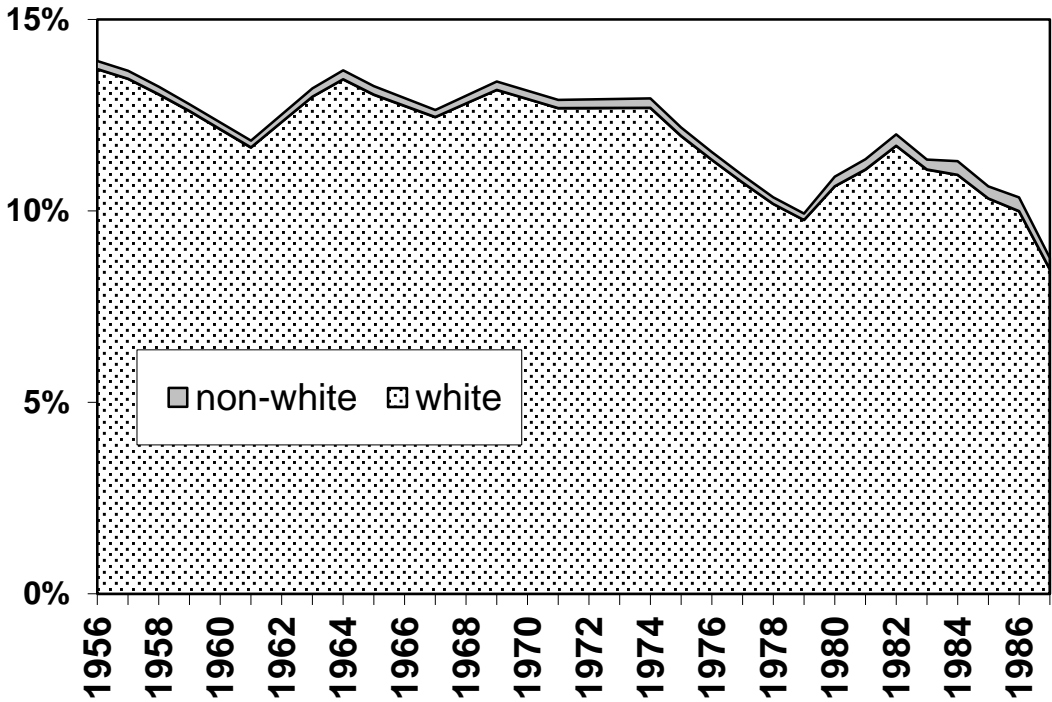


Figure A4 – Whites and non-whites within the top 1% share in South Africa



Source: Alvaredo & Atkinson 2007

Figure A5 – Top income shares within Tunisians in Tunisia 1946-1956

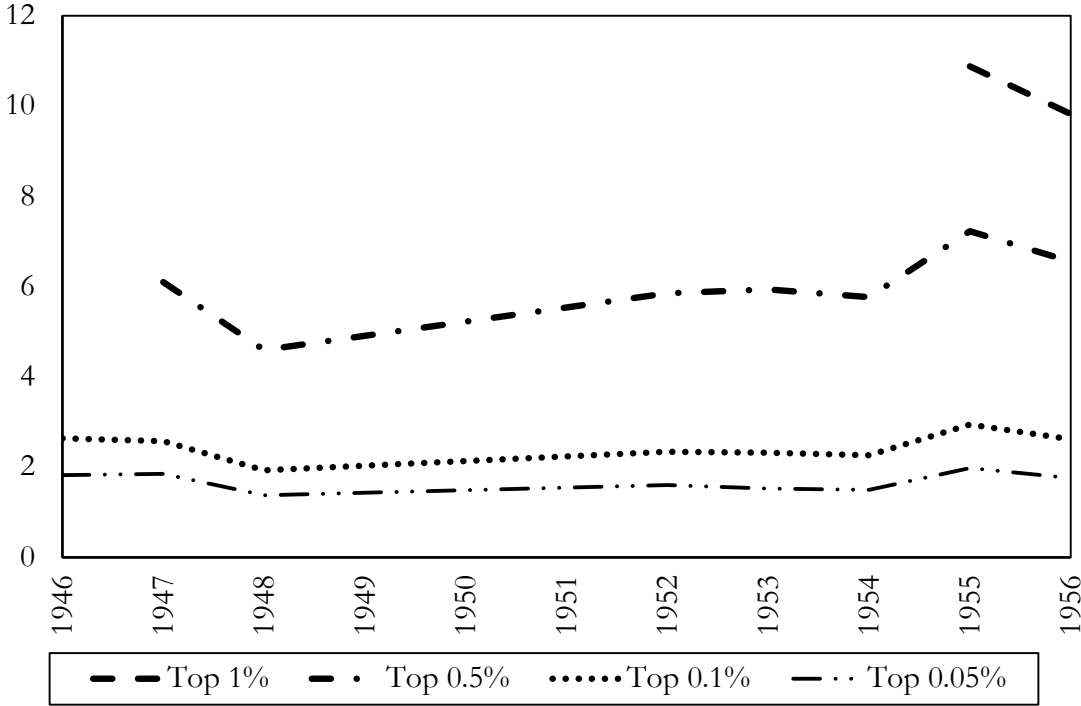


Table A4 – Distribution of income among Tunisian Muslims according to a household survey in 1957

Income brackets (francs)	Rural			Urban			Total					
	N (thousands)		Income (milliards)	N (000)		Income (milliards)	N (thousands)		Income (milliards)			
0 to 20000	1666	54%	21	26%	348	23%	6,3	7%	2014	43%	27,3	15%
20000 to 30000	605	73%	15	44%	222	37%	5,6	13%	827	61%	20,6	27%
30000 to 40000	305	83%	11	57%	93	43%	3,3	16%	398	70%	14,3	35%
40000 to 50000	177	89%	8	67%	117	51%	5,3	22%	294	76%	13,3	43%
50000 to 60000	101	92%	6	74%	118	59%	6,5	28%	219	81%	12,5	50%
60000 to 70000	69	94%	4	79%	55	62%	3,6	32%	124	84%	7,6	54%
70000 to 80000	41	96%	2	82%	73	67%	5,5	38%	114	86%	7,5	58%
80000 to 90000	27	96%	2	84%	46	70%	3,9	42%	73	88%	5,9	62%
above 90000	110	100%	13	100%	457	100%	55	100%	567	100%	68	100%
Total	3101		82		1529		95		4630		177	

Source : Samir Amin, 1966. *L'économie du Maghreb*, Paris : Editions de Minuit. Page 122 for rural households, page 159 for urban.

Figure A6 – Top 0.1% shares in French and British colonies 1945-1960

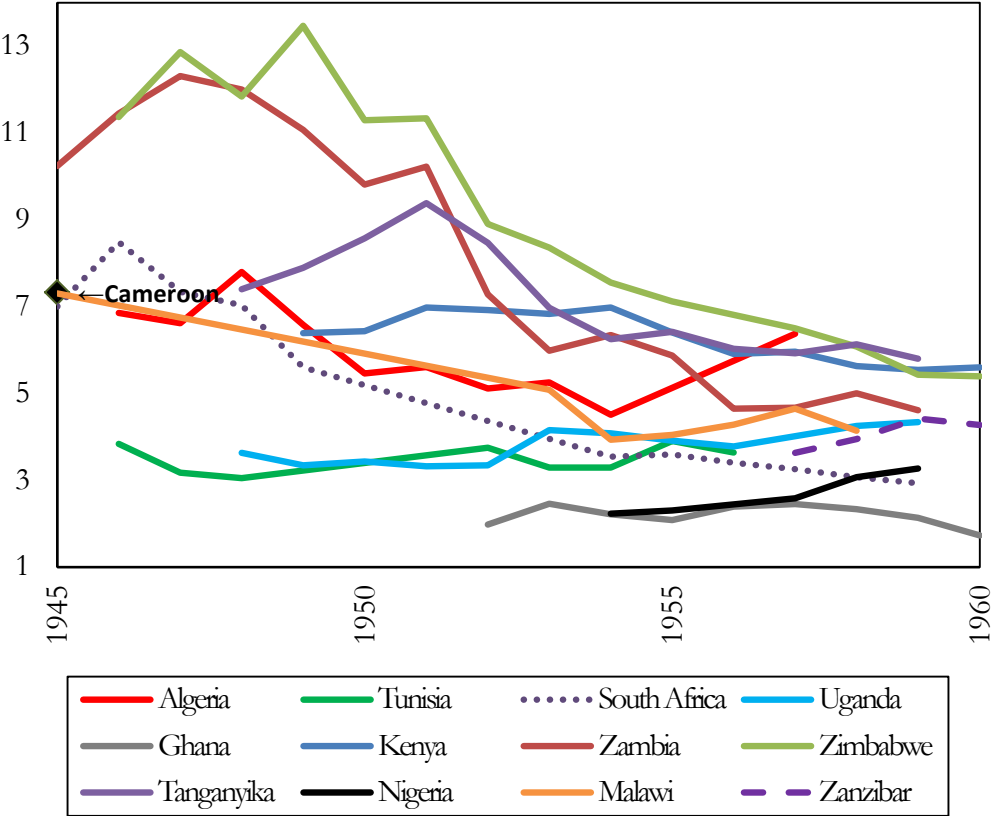


Figure A7 – Zoom of Figure 7 without South Africa and Zimbabwe

